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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,433	03/19/2004	Atsushi Nakajima	KOY-29	7159
20311	7590	06/23/2006	EXAMINER	
LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			TRAN, LY T	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,433

Applicant(s)

NAKAJIMA, ATSUSHI

Examiner

Ly T. TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al (US. 2003/0035037) in view of Moriyama et al (USPN 5,739,828).

With respect to claims 1-4, 6 and 7, Mills discloses an apparatus and a method of an image recording comprising: a recording head of an ink jet system for jetting an ultraviolet curable ink on a recording medium to form an image (Abstract); and an irradiation device for radiating an ultraviolet ray to the ink placed on the recording medium to cure and fix the ink (Column 3: [0050]), a recording type is a serial print type in which the recording head of the ink jet system and the irradiation device for radiating an ultraviolet ray are mounted on a same carriage (Column 1:[0011]) and a recording type is a line print type (Column 1: [0010]) and four or more recording heads for forming an image by jetting four colors of inks of yellow, magenta, cyan, and black (Column 3: [0050])

However, Mills fails to teach an apparatus has a plurality of recording modes with different image recording speeds for changing a maximum amount of ink to be jetted

Art Unit: 2853

corresponding to the plurality of recording modes, wherein the maximum amount of ink to be jetted is decreased for a recording mode with a high image recording speed, and the maximum amount of ink to be jetted is increased for a recording mode with a low image recording speed, in the plurality of recording modes and generating almost no gap on the recording medium.

Moriyama et al teaches an apparatus has a plurality of recording modes (Abstract) with different image recording speeds for changing a maximum amount of ink to be jetted corresponding to the plurality of recording modes, wherein the maximum amount of ink to be jetted is decreased for a recording mode with a high image recording speed, and the maximum amount of ink to be jetted is increased for a recording mode with a low image recording speed, in the plurality of recording modes (Column 16: line 26-56), generating almost no gap on the recording medium (Fig.30-39).

Moriyama teaches the discharge volume per dot is different between each modes and the amount of ink shot is independently set in order to perform the recording with high quality and at high resolution without regard to input data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the total amount of ink to be jetted is 5 g/m.² or more, since applicant has not discloses that the total amount of ink to be jetted is 5 g/m.² or more solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any amount of ink. .

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al (US. 2003/0035037) in view of Moriyama et al (USPN 5,739,828) as applied to claim 1 above, further in view of Hintermann (US 2004/0189770)

The combination of Mills and Moriyama fails to teach the recording type is a flat bed print type.

Hintermann teach the recording type is a flat bed print type (Column1: [0003]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made as modify Mills to use a flat bed print type as taught by Hintermann. The motivation of doing is to easily print material that cannot be rolled such as glass.

Response to Arguments

3. Applicant's arguments filed 5/15/06 have been fully considered but they are not persuasive.

Applicant argues that it is improper to combine Moriyama with Mills because Moriyama uses water bases ink, which is not UV ink as Mills. This argument is not persuasive because Mills discloses an image recording head for an ink jet system for jetting UV curable ink on a medium. The Examiner only relies on Moriyama for the teaching of an apparatus that has a plurality of recording modes with different image recording speeds for changing a maximum amount of ink to be jetted corresponding to the plurality of recording modes, wherein the maximum amount of ink to be jetted is decreased for a recording mode with a high image recording speed, and the maximum amount of ink to be jetted is increased for a recording mode with a low image recording

Art Unit: 2853

speed, in the plurality of recording modes and generating almost no gap on the recording medium.

Furthermore, Applicant argues that the combination of Mills and Moriyama does not teach that the amount of ink is a function of the recording speed. However, this feature is not in the claim language. The claims require that the maximum amount of ink corresponds to recording modes. The recording modes happen to have different speeds, but the claims in no way correlate ink amount to speed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

Art Unit: 2853

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT

June 12, 2006



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER